

Notice of Allowability

Application No.

09/871,571

Examiner

Man Phan

Applicant(s)

DENEIRE ET AL.

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the communications filed 04/22/2005.
2. ☒ The allowed claim(s) is/are 5-17, 20, 21, 26-30, 34-39 and 44-46 (Claims are renumbered as 1-29 respectively).
3. ☒ The drawings filed on 22 April 2005 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Reasons for allowance

1. This communication is in response to applicant's 04/22/2005 amendment in the application of Deneire et al. for a "Method and apparatus for channel estimation" filed 05/30/2001. The proposed amendments has been entered and made of record. Claims 1-4, 18-19, 22-25, 31-33, 40-43 and 47-50 have been canceled per applicant's request, and claims 5, 20, 26, 30, 34, 39 and 44, 46 have been amended to better point out and more distinctly claim subject matter comprising the invention.

The amended paragraphs in specification correct the status of the related Application, and the Abstract has been amended to correct the legal phraseology. Therefore, the disclosure is now accepted.

In view of applicant's amendment to amend the claims 37, 39, 46, and have eliminated the phrase "capable of". Therefore, examiner has withdrawn the Objections of record to claims 37, 39, 46.

2. Claims 5-17, 20, 21, 26-30, 34-39 and 44-46 are allowable as evident by applicant's amendment (Claims are renumbered as 1-29 respectively)

3. The following is an examiner's statement of reasons for allowance: The prior art of record fails to disclose or suggest wherein the determining of maximum likelihood frequency domain estimate comprises transforming the reference tones in time domain measurements, determining from the time measurements maximum likelihood time domain estimates, and

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transforming the maximum likelihood time domain estimates in frequency domain for obtaining the maximum likelihood frequency domain estimate; determining an intermediate result by multiplying a partial weighted N_h by N_u IFFT matrix with the reference tones with N_h the length of finite time response, and multiplying the intermediate result with a partial weighted N_f by N_h FFT matrix, to thereby obtain the maximum likelihood frequency domain estimates, as specifically recited in the claims. The instant invention, in combination with the other claimed features, improves upon the Prior Art by providing a method and system for modern telecommunications system wherein equalization is exploited and channel estimation is needed.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Man U. Phan whose telephone number is (571) 272-3149. The examiner can normally be reached Monday through Friday from 6:00 am to 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

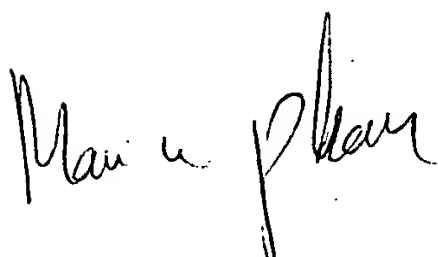
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

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6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at toll free 1-866-217-9197.

MPhan

07/08/2005

A handwritten signature in black ink, appearing to read "Man U. Phan", written in a cursive style.

MAN U. PHAN
PRIMARY EXAMINER